

AP Statistics Worksheet
Observational Studies vs. Experiments

Name: _____

Determine if the below situations are observational studies or experiments—and why.

1. Over a 4-month period, among 30 people with bipolar disorder, patients who were given a high dose (10g/day) of omega-3 fats from fish oil improved more than those given a placebo. (*Archives of General Psychiatry* 56 [1999]: 407)
2. The leg muscles of men aged 60 to 75 were 50% to 80% stronger after they participated in a 16-week, high-intensity resistance-training program twice a week. (*Journal of Gerontology* 55A [2000]: B336)
3. Among a group of disabled women aged 65 and older who were tracked for several years, those who had a vitamin B₁₂ deficiency were twice as likely to suffer severe depression as those who did not. (*American Journal of Psychology* 157 [2000]: 715)
4. In 2001 a report in the *Journal of the American Cancer Institute* indicated that women who work at nights have a 60% greater risk of developing breast cancer. Researchers based these findings on the work histories of 763 women with breast cancer and 741 women without the disease.
5. In 2002, the journal *Science* reported that a study of women in Finland indicated that having sons shortened the lifespan of mothers by about 34 weeks per son, but that daughters helped to lengthen the mothers' lives. The data came from church records from the period 1640 to 1870.
6. Some gardeners prefer to use nonchemical methods to control insect pests in their gardens. Researchers have designed two kinds of traps, and want to know which design will be more effective. They randomly choose 10 locations in a large garden and place one of each kind of trap at each location. After a week, they count the number of bugs in each trap.